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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/013,067	12/07/2001	Dan Sanchez	155695-0221	8579

1622 7590 04/16/2003

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EXAMINER

MARC, MCDIEUNEL

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

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5

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Commissioner of Patents and Trademarks

See attached PTO-Forms and Office Action.

Office Action Summary**Application No.**

10/013,067

Applicant(s)

SANCHEZ ET AL.

Examiner

McDieunel Marc

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35 and 39-42 is/are allowed.
- 6) ☒ Claim(s) 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

1. This is in response to a letter for patent filed on December 7th, 2001, in which claims **1-42** are presented for examination. Claims **1-42** are pending in the letter.
2. Applicant is requested to provide translated copies of the foreign patent documents cited on the PTO-1449 and copies of all the non patent literature (NPL) documents cited on the 1449 in the next communication.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

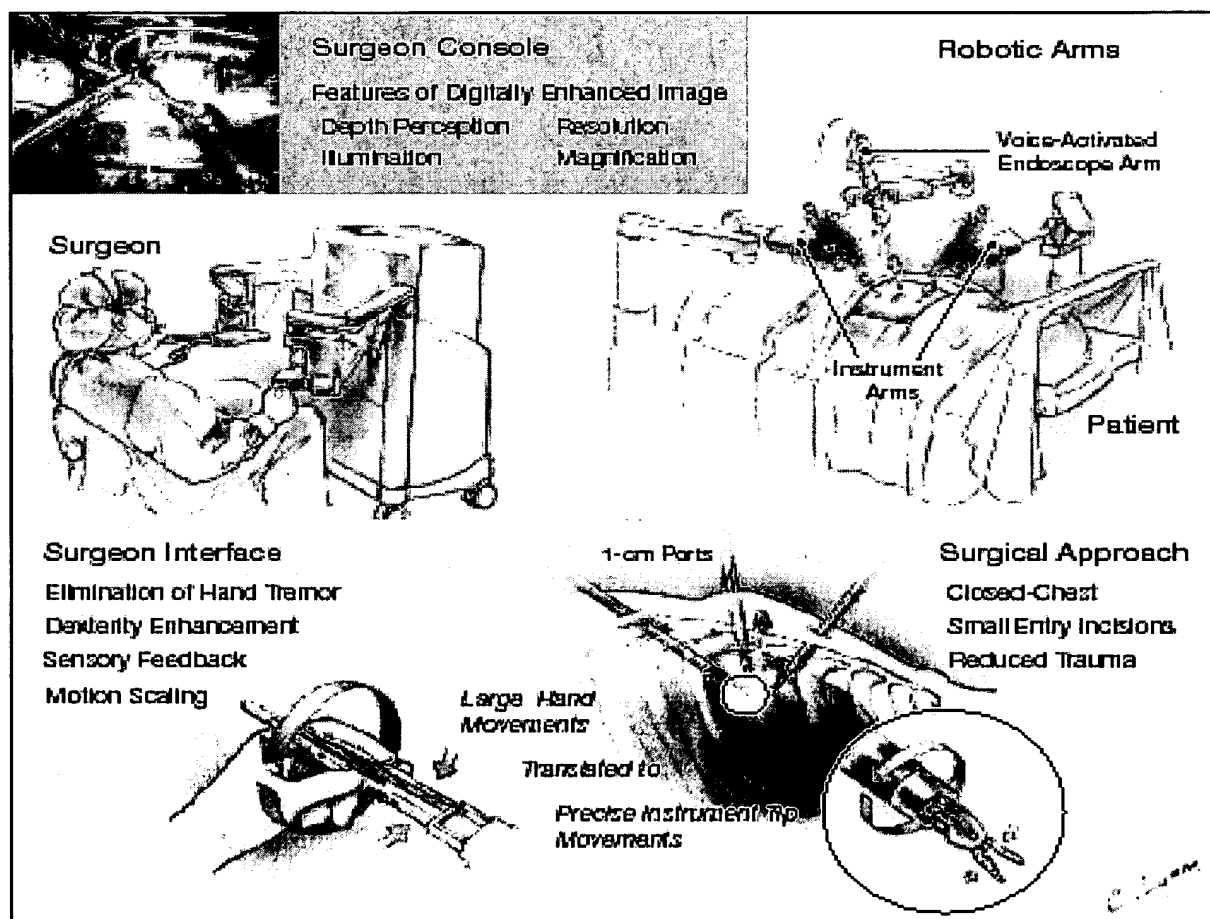
5. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mack** ("*Minimally Invasive and Robotic Surgery, 2001*") in view of **Long et al.** (U.S. Pat. No. 6,419,429 B1).

As per claim 36, **Mack** teaches substantially "Minimally Invasive and Robotic Surgery" including **ZEUS^{TM1}** which correspond to the limitation of robotic system (see the following Fig. 1). Clearly, figure 1 has been shown to teach a medical instrument (see Fig. 1, particularly *Robotic Arms*); as to the handle (see Fig. 1, particularly *Surgeon Interface*), please note that the surgeon interface contains two handles that being considered as two input devices/handles for indicating surgical movements or for a better view (see <http://www.sti.nasa.gov/tto/spinoff2000/hm1.htm>).

Although, Mack teaches the handle with a grasper, however, Mack does not specifically teach or show an elliptical shaped handle housing.

¹ The **ZEUS[®]** Surgery Robotic System is similar to the **Da VinciTM** system. At a console the surgeon controls the instrument handles while viewing the operative area on a monitor. Using a computer interface the surgical instruments attached to a three arms robot mimic the surgeon's movements on a real time on the patient as seen in figure. One of the armed is designed for the endoscope controlled by voice control. The technology available eliminates the slight hand tremors of the surgeon and also allow the surgeon to scale their natural movements to a microscopic scale. The ZEUS system has many advantages such as small incision about the diameter of pencil, reduced patient pain and trauma, and short hospital stays.

Elliptical handle grip has been on the market since 1888 by Olympic Bicycles as seen as evidence (see Mercury Olympic Onward Peter Pan Price Sankey Stallard, page 2 of 5, lines 3-4).



However, Long et al. teaches router with ergonomic handles having show an elliptical shaped handle housing (see abstract, figs. 1-3, elements 16l and 16r).

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to introduce into ZEUS and elliptical shaped handle as taught by Long *et al.*, because this modification would have enhanced the design choice of the handle so that a user

can securely grasp it, thereby improving the efficiency and the reliability of the microwrist system for surgical procedure.

As per claims 36 and 37, Mack in view of Long et al. teach the claimed invention substantially as explained above, further, Long *et al.* teaches a plurality of buttons (see col. 1, line 17 and col. 3, lines 2-6) as cited in claim 36; with respect to claim 37, said grasper includes a switch that locks the grasping in the desire position (see col. 1, lines 16-17 *et seq.* and 40-43).

Allowable Subject Matter

6. Claims 1-35 and 39-42 are allowed.

7. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to teach a robotic master handle assembly that has only five degrees of freedom comprising a spinning handle and a translator that is coupled to a wrist joint coupled to the handle as cited in claim 1; with respect to claim 6, a robotic master handle assembly that has only five degrees of freedom comprising translator means for allowing translation of a wrist means and a handle means; with respect to claim 11, a robotic master handle assembly that has only five degrees of freedom comprising a pinning handle coupled to a controller and a translator that is coupled to a wrist joint; with respect to claim 16, a robotic

system having a translator means for allowing translation of a wrist means and said handle means to translate said medical instrument; with respect to claim 21, a robotic master handle assembly that has only five degrees of freedom comprising translating the handle relative to a translation axis; with respect to claims 25, 30 and 35, a system and an associated method wherein a robotic system having a translator coupled to said handle, said translator allow movement of said handle relative to a translator axis; with respect to claims 39-42, a robotic master handle assembly that has only five degrees of freedom comprising a fifth joint that provides a fifth degree of freedom for said handle ... in combination with the other elements and features of the claimed invention.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*** The prior arts cited in PTO-Form 892 with the exclusion of (Mack, Long *et al.* and Mercury) disclose pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (703) 305-4478. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, Jr. can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


McDieunel/Marc

April 6, 2003

MM/